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Title : Group structure and residency of Lagenorhynchus dolphins in Atlantic coastal waters; A preliminary analysis

Category : Behavior

Student : Not Applicable

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Abstract : Atlantic white-sided and white-beaked dolphins (*Lagenorhynchus acutus* and *L. albirostris*) were observed in coastal waters near Halifax, Nova Scotia between 1997 and 2002. Differences in group size, sighting seasonality and residency patterns were observed. Calves and juveniles were observed in both species, although only white-beaked neonates were observed. Group size in white-beaked dolphins was relatively small (mean 8.1, s.e. 0.77, range 1-25, n = 52). Sightings occurred predominately from May to mid-July, some into August. Photo-identification surveys conducted in 1999 and 2002 yielded 19 and 22 identified individuals, respectively. No individuals were sighted in both years, and only two were observed more than once in 1999, both eight days apart. Approximately 51% of individuals were estimated to be identifiable using notches on the dorsal fins; however additional individuals will be identifiable by pigmentation patterns in the saddle patch.

Group size was much larger in Atlantic white-sided dolphins (mean = 42.3, s.e. 4.02, range 3-250, n = 88), and they were sighted predominately from mid-July to early September, some into October. Photo-identification surveys indicated greater residency for white-sided dolphins, although surveys were only conducted in 2002. Thirty-four different individuals were sighted in five groups on three separate days. Five individuals were observed on two or more different days, and one individual was observed on all three days (14 days apart). Approximately 54% of individuals had dorsal fin notches. Group size of white-sided dolphins was similar to those reported off New England; however, residency times were much longer than in the New England study.

This study indicates that both species routinely use the waters near Halifax, but there is temporal separation. The data suggest that white-beaked dolphins are relatively transient, while white-sided dolphins are resident. Ongoing photo-identification studies are providing further information on residency and social behavior in these sympatrically-occurring species.